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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/540,756 | 06/24/2005 | Jean-Pierre Cougoulic | 0510-1114 | 7167 |
| 466 | 7590 | 10/29/2007 | | |
| YOUNG & THOMPSON 745 SOUTH 23RD STREET 2ND FLOOR ARLINGTON, VA 22202 | | | EXAMINER PEPITONE, MICHAEL F | |
| | | | ART UNIT 4134 | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/540,756

Applicant(s)

COUGOULIC, JEAN-PIERRE

Examiner

Michael Pepitone

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☒ Claim(s) 15 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 6/24/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION***Information Disclosure Statement***

The listing of references in the Search Report is not considered to be an information disclosure statement (IDS) complying with 37 CFR 1.98. 37 CFR 1.98(a)(2) requires a legible copy of: (1) each foreign patent; (2) each publication or that portion which caused it to be listed; (3) for each cited pending U.S. application, the application specification including claims, and any drawing of the application, or that portion of the application which caused it to be listed including any claims directed to that portion, unless the cited pending U.S. application is stored in the Image File Wrapper (IFW) system; and (4) all other information, or that portion which caused it to be listed. In addition, each IDS must include a list of all patents, publications, applications, or other information submitted for consideration by the Office (see 37 CFR 1.98(a)(1) and (b)), and MPEP § 609.04(a), subsection I. states, "the list ... must be submitted on a separate paper." Therefore, the references cited in the Search Report have not been considered. Applicant is advised that the date of submission of any item of information or any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the IDS, including all "statement" requirements of 37 CFR 1.97(e). See MPEP § 609.05(a).

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Specification

The disclosure is objected to because of the following informalities: The typo "sodium hypochloride" should be "sodium hypochlorite" (pg. 6, ln. 21). The typo "(NaClo)" should be "NaOCl" (pg. 6, ln. 21). Appropriate correction is required.

Claim Objections

Claims 15 and 17 objected to because of the following informalities: The typo "sodium hypochloride" should be "sodium hypochlorite". Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6-14, 16, and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cougolic (US Patent 5,872,159) in view of Layrolle *et al.* (US 2005/0170070).

Regarding claims 1, 8, 9-14, 16, and 18-20 : Cougolic teaches a material for medical or veterinary use designed for the execution of endo-bone implants, bone prostheses, and dental implants, wherein the material is in the form of a molded part made of a biocompatible binder containing at least one compound for adding calcium or phosphorous (1:35-62). Said material

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prepared by homogenously mixing the binder with the components for adding calcium and phosphorous, and subjecting the mixture thus obtained to a molding operation [instant claim 8] (2:56-60; 3:20-4:20). Cougoulic does not teach a surface pickling operation. However, Layrolle *et al.* teaches a method of applying a bioactive coating to medical devices (orthopedic and dental prostheses) comprising a chemical surface treatment (acid etch) {pickling}, wherein the surface treatment comprises at least one bath subjected to ultrasounds [instant claim 9], at least one bath of pickling product subject to ultrasounds [instant claim 10], successive baths subjected to ultrasounds [instant claim 11], a hydrochloric acid and sulphuric acid bath [instant claim 12], an acetone bath [instant claim 13], a hydrogen peroxide bath [instant claim 14], a decontamination bath [instant claim 16], and autoclaving after passage through at last one bath subjected to ultrasounds [instant claim 18]. (§ 1, 17, 20, 21, 23-27, and 75). Cougoulic and Layrolle *et al.* are combinable because they are concerned with a similar technical difficulty, namely the preparation medical (bone and dental) implants. At the time of invention a person of ordinary skill in the art would have found it obvious to have combined a chemical surface treatment, as taught by Layrolle *et al.* in the invention of Cougoulic, and would have been motivated to do so since Layrolle *et al.* suggests that such chemical surface treatment provide a good adhesion of the coating (§ 21), and is an equivalent alternative means of providing a medical (bone and dental) implant.

Regarding claim 2: Cougoulic teaches the basic claimed composition [as set forth above with respect to claim 1], wherein the compound for adding calcium or phosphorous comprises tricalcium phosphate and calcium hydroxyapatite (1:55-2:3).

Regarding claims 3-4: Cougoulic teaches the basic claimed composition [as set forth above with respect to claim 1], wherein the binder is a thermoplastic polymer [instant claim 3], specifically polyetheretherketone (PEEK) [instant claim 4] (2:23-43).

Regarding claim 6: Cougoulic teaches the basic claimed composition [as set forth above with respect to claim 1], further comprising the oxides TiO_2 , ZrO_2 , and Al_2O_3 (2:44-50).

Regarding claim 7: Cougoulic teaches the basic claimed composition [as set forth above with respect to claim 1], wherein the thermoplastic polymer represents at least 65 weight% of the composition, and 10-35 weight% of chemical components designed for fostering biological integration, such as tricalcium phosphate, calcium hydroxyapatite, and metallic oxide (TiO_2) (3:1-14).

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cougoulic (US Patent 5,872,159) in view of Layrolle *et al.* (US 2005/0170070), as applied to claim 1 above, and in further view of Ellingsen *et al.* (US 2002/0111694).

Regarding claim 5: Cougoulic teaches the basic claimed composition [as set forth above with respect to claim 1], but does not teach cellulose as a binder. However, Ellingsen *et al.* teaches medical prosthetic devices and implants (bone and dental) comprising cellulose as a biopolymer (§ 2, 9, and 19). Cougoulic and Ellingsen *et al.* are combinable because they are concerned with a similar technical difficulty, namely the preparation medical (bone and dental) implants. At the time of invention a person of ordinary skill in the art would have found it obvious to have combined cellulose, as taught by Ellingsen *et al.* in the invention of Cougoulic, and would have been motivated to do so since Ellingsen *et al.* suggests that cellulose provides

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tissue resilience, strength, rigidity, and integrity of the extracellular matrix (§ 21), and is an equivalent alternative means of providing a medical (bone and dental) implant.

Claims 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cougoulic (US Patent 5,872,159) in view of Layrolle *et al.* (US 2005/0170070) as applied to claim 1 above, and in further view of Carr (US Patent 5,509,968).

Regarding claims 15 and 17: Cougoulic teaches the basic method [as set forth above with respect to claim 1], but does not teach a sodium hypochlorite bath. However, Carr teaches a method of decontaminating orthopedic implants by ultrasonic cleaning utilizing a sodium hypochlorite bath (1:1-14; 1:58-67; 2:29-38; 8-25:30). Cougoulic and Carr are combinable because they are concerned with a similar technical difficulty, namely the decontamination of medical implants. At the time of invention a person of ordinary skill in the art would have found it obvious to have combined a sodium hypochlorite bath, as taught by Carr in the invention of Cougoulic, and would have been motivated to do so since Carr suggests that ultrasonic cleaning with sodium hypochlorite provides a decontaminated surface (8:31-43), and is an equivalent alternative means of providing a decontaminated medical implant.

The prior art made of record and not relied upon is considered pertinent to applicants' disclosure. See attached form PTO-892.

Correspondence


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Pepitone whose telephone number is 571-270-3299. The examiner can normally be reached on M-F, 7:30-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on 571-272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MFP
17-October-2007


MARK EASHOO, PH.D.
SUPERVISORY PATENT EXAMINER

26/OCT/07